WHAT IS CLAIMED IS:

1. A continuous process for mixing a thermoplastic polycarbonate melt with at least one additive comprising adding at least one additive to a main stream that includes molten polycarbonate and then mixing the additive and polycarbonate in a static mixer
said additive being in liquid form, in solution or in the form of a dispersion.

2. The process according to Claim 1, wherein the temperature of the main stream before the mixing is less than 320°C.

3. The process according to Claim 1 wherein the residence time of the main stream in the static mixer is 20 to 120 seconds.

4. The process according to Claim 1 wherein the at least one additive is added to the main stream in the form of a side stream that includes a premixture of polycarbonate melt .

5. The process according to Claim 4, wherein the weight ratio of the side stream to the main stream is 1:4 to 1:30.

6. The process according to Claim 4 wherein the side stream is prepared by melting secondary polycarbonate.

7. The process according to Claim 6, wherein at least a portion of at least one additive is fed to the side stream after the melting of the polycarbonate, and is mixed in using a further static mixer to form the side stream.

8. The process according to Claim 7, wherein the residence time in the further static mixer is 10 to 300 seconds.

9. Continuous process for mixing highly viscous polymer melts as main stream in a flow tube with additives from a liquid side stream, characterized in that the additives (11) are premixed with part of the polymer melt (12) in the side stream, that the additive-containing side stream (13) is fed through a feed line (14) arranged in particular centrally in the flow tube, into the main stream (8), the combined streams are intensively mixed in a first static mixer (10) directly connected downstream, and this premixture is finely divided in a mixing tube (15) of

enlarged cross-section and in a second static mixer (16) of finer structure (mesh width).

10. Process according to claim 9, characterised in that the cross-section of the mixing tube of the second static mixer is by a factor of at least 1.2 larger than the cross-section of the mixing tube of the first static mixer.

11. Process according to claim 9 characterised in that the cross-section of the mixing tube of the second static mixer is by a factor of at least 2 larger than the cross-section of the mixing tube of the first static mixer.

12. Process according to claim 9 characterised in that the number of the product throughput openings (per unit surface area) in the second static mixer is at least 1.5 times the number of throughput openings (per unit surface area) in the first static mixer.

13. Process according to claim 9 characterised in that the highly viscous polymer melt is polycarbonate.

14. The mixture of thermoplastic polycarbonate and at least one additive prepared by the process of Claim 1.

15. The mixture of thermoplastic polycarbonate and at least one additive prepared by the process of Claim 9.